

**IN THE UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF ILLINOIS**

UNITED STATES OF AMERICA,)	
)	
Plaintiff,)	Case No. 05-CV-242 DRH
)	
vs.)	CJRA Track: C
)	
APEX OIL COMPANY, INC.,)	Hon. David R. Herndon
)	
Defendant.)	

**APEX OIL COMPANY, INC.'S MEMORANDUM IN SUPPORT OF ITS MOTION TO
STRIKE DR. CHRISTOPHER WEIS' TRIAL TESTIMONY AND REPORT**

Defendant has moved to strike the testimony and report of Dr. Christopher Weis, Plaintiff's expert toxicologist. The motion should be granted.

Argument

I. IN THIS COURT-TRIED CASE, THE COURT SHOULD EXAMINE THE RELIABILITY AND RELEVANCE OF DR. WEIS' OPINIONS AT THE POST-TRIAL STAGE, AND SHOULD EXCLUDE THEM FROM THE RECORD IF THEY FAIL TO MEET THE STANDARDS OF FED.R.EVID. 702.

The Court is about to decide the complex scientific and factual issues presented by an extensive seventeen-day trial record, containing voluminous expert testimony. An important issue, on which much evidence was presented, is whether the hydrocarbons in Hartford "may present an imminent and substantial endangerment to health or the environment" as required before Plaintiff United States can obtain the relief it seeks under 42 U.S.C. §6973(a). For reasons that became fully apparent only at trial, the record contains testimony of a key government witness--its expert toxicologist, Dr. Christopher Weis--that does not come close to passing muster under the governing principles related to scientific evidence in federal courts, as embodied by *Federal Rules of Evidence* Rule 702 and *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 592-93 (1993).

Whether in the exercise of a “gatekeeper” function with regard to admission of expert testimony, *Smith v. Ford Motor Company*, 215 F.3d 713, 718 (7th Cir. 2000), or as finder of fact, the Court should, at the outset of its consideration of the issues before it, strike from the record (or determine to disregard as not credible in its entirety) the testimony and report of Dr. Weis. It has been held that in some circumstances a court may employ *Daubert* principles in ruling on a post-trial motion. “The district court may also satisfy its gatekeeper role when asked to rule on a motion in limine, on an objection during trial, or on a post-trial motion so long as the court has sufficient evidence to perform ‘the task of ensuring that an expert's testimony both rests on a reliable foundation and is relevant to the task at hand’.” *Goebel v. Denver & Rio Grande Railroad Co.*, 215 F.3d 1083, 1087 (10th Cir. 2000), citing *Daubert*, 509 U.S. at 597.

The proponent of expert testimony has the burden of establishing that the proffered testimony is both reliable and relevant. *Daubert*, 509 U.S. at 594-595. With respect to Rule 702 expert witness admissibility issues, the *Daubert* court set forth four non-exclusive factors appropriate for a district court’s consideration when determining expert testimony’s admissibility:

- 1) Whether a theory has been or can be falsified;
- 2) Whether the theory or technique has been subject to peer review and publication;
- 3) Whether there are known or potential rates of error with regard to specific techniques; and
- 4) Whether the theory or approach has general acceptance.

Id. at 593-95.

Qualification of the expert alone is insufficient; the expert’s proffered opinions must be shown to be reliable. *Smith v. Ford Motor Co.*, 215 F.3d 713, 718 (7th Cir. 2000); *Caraker v. Sandoz Pharm. Corp.*, 188 F. Supp.2d 1026, 1030 (S.D. Ill. 2001). The “hallmark” of this

reliability is the “scientific method, *i.e.*, the generation of testable hypotheses that are then subjected to the real world crucible of experimentation, falsification/validation, and replication.” *Caraker*, 188 F. Supp.2d at 1030. Proposed expert testimony should “fit” - *i.e.*, the “science” involved in the expert testimony must “fit” the issue on which the expert is opining. *O’Connor v. Commonwealth Edison Co.*, 13 F.3d 1090 at 1106 (7th Cir. 1994) and *Caraker, supra*, at 1030. Expert testimony cannot rely solely on the expert’s say so -- such *ipse dixit* testimony does not meet *Daubert* standards. *General Electric Co. v. Joiner*, 522 U.S. 136, 146, 139 L. Ed. 2d 508, 519, 118 S. Ct. 512 (1997).

The testimony and report of Dr. Weis falls far short of meeting these standards, and so should be stricken from the record.

II. DR. WEIS’ TESTIMONY AND REPORT SHOULD BE STRICKEN AND DISREGARDED ON RULE 702 AND *DAUBERT* GROUNDS, BECAUSE HE DID NOT RELIABLY APPLY THE METHODOLOGY OF HIS DISCIPLINE, TOXICOLOGY; RATHER, DR. WEIS’ CONCLUSIONS ABOUT THE RISK OF ELEVATED HYDROCARBON LEVELS IN HARTFORD ARE INFECTED WITH RECURRING ERROR AND REST ON NO MORE THAN HIS OWN *IPSE DIXIT*.

Dr. Weis’ testimony went to the issue of risk, including both the claimed risk to human health resulting from hydrocarbon contamination in Hartford and the explosion and fire risk supposedly also present in the Village. Cross-examination at trial showed that his evaluation of that risk of toxicity was superficial, infected by repeated errors, and inconsistent with the standard methodology of his discipline. Likewise, Dr. Weis is not qualified to render opinions on fire and explosion risks, and his testimony on that subject is without sound scientific basis. His testimony should be stricken in its entirety.

In 2006, Dr. Weis provided a Rule 26 expert report (Plf. Ex. 165) that purportedly contained the sum of his opinions concerning the risk to residents of Hartford presented by

petroleum hydrocarbons. The centerpiece of the report about toxicological risk were opinions 3 and 4, opinions that he also expressed at trial (Ex. 165, at 4; Tr. Day 4 pm, pp. 90-91):

- 3) Concentrations of benzene (C_6H_6 ; CAS #71-43-2) randomly and unpredictably exceed the acute (short term) risk levels for non-cancer toxicity established by the Centers for Disease Control and Prevention (CDC).
- 4) Concentrations of benzene randomly and unpredictably exceed the long term risk level for non-cancer toxicity established by the Centers for Disease Control and Prevention (CDC) and the U.S. Environmental Protection Agency.

The “risk levels” referred to by Dr. Weis, as he acknowledged, are the Minimum Risk Levels (“MRL’s”) for benzene established by the United States Agency for Toxic Substances and Disease Registry. As both Dr. Weis and Apex’s expert risk assessor, Dr. Atul Salhotra, testified, MRL’s are conservatively established screening levels. Their use is intended as a first step in the analysis of risks posed by contaminants at a site. (Weis, Tr. Day 4 pm, pp. 78-79; Salhotra, Tr. Day 16 pm, p. 131). MRL’s are often several orders of magnitude (that is, hundreds or thousands of times) less than the lowest level at which effects are observed, even in animals. (Salhotra, Tr. Day 16 pm, pp. 131-132) (Ex. 171, p.2). As the ATSDR itself states, “MRL’s are intended as a screening tool to help public health officials decide where to look more closely.” (Ex. 171, p.2). Dr. Weis conceded that whether an exposure to a contaminant in excess of an MRL represents an unacceptable risk depends on the circumstances, including principally the magnitude of the exceedance. (Tr. Day 5 am, pp. 60-61).

Dr. Weis testified that, once exceedances of an MRL are identified, further analysis is required to evaluate the existence and severity of any risk. As he stated,

“Q. Once you identify the exceedance of an MRL, what is the next step?

A. It depends upon the magnitude of the exceedance, and -- it depends upon a number of things: Magnitude of the

exceedance, whether or not someone's exposed, the amount of time that they might be exposed, the frequency they might be exposed to that value. There are a variety of different actions that could be taken.”

(Tr. Day 5 am at 59).

Dr. Weis’ testimony showed that, in this case, he took none of the steps that are necessary to evaluate risk once the presence of a contaminant above MRL’s is confirmed. For example, Dr. Weis ignored entirely evidence concerning the frequency with which people in Hartford might be exposed to the exceedances in question. The Hartford Working Group had collected over 1700 samples of indoor and outdoor air to test for the presence of benzene and other hydrocarbons. (Tr. Day 5 am, p. 58). Almost all of these samples reflected concentrations of benzene below the MRLs for acute and toxic risk, so that actual exposures to levels of benzene above the MRL’s, if any occurred in Hartford, were few and far between. Dr. Weis ignored this fact entirely. He ignored the large number of samples for which benzene readings were below the MRLs, relying entirely on the few samples where, he said, exceedances were found.

Dr. Salhotra testified to basic principles used in evaluating the risk of contaminants to humans. In particular, he said, once it is determined that contaminants exceed screening levels, it is “prudent to do a detailed analysis. “ (Tr. Day 16 am, pp. 62-63). Dr. Salhotra, in fact, performed such an analysis, developing risk-based target levels, analyzing the entire body of indoor air sampling data from Hartford, and considering issues that Dr. Weis himself identified as important, such as whether or not people were exposed, the length of exposure, and the frequency of exposure, in addition to the simple size of any exceedances present. He considered the individual circumstances of certain of the homes.

Dr. Weis did no such analysis. He did not quarrel with this general principle that a detailed analysis is sometime necessary. Dr. Weis testified, however, that there are some cases

where the magnitude of the exceedances alone is so great that no further analysis is required to determine whether unacceptable risk is present. He found this to be such a case. He concluded that the indoor air concentrations of benzene -- the sole contaminant identified in his opinions 3 and 4 as set out above, as well as his comparable opinion 5 related to cancer risk -- were so high that it was beyond dispute that there is an unacceptable toxic risk in Hartford. Dr. Weis performed no further analysis of the indoor air exposures after he identified a number of what he described as very large benzene exceedances. Dr. Weis acknowledged that once he identified the exceedances of the benzene MRL's as described in his report, he did not do any further analysis of the particular individuals, their environments, or their homes. (Tr. Day 5 am, p. 60). He testified:

What I did was look at the data, and what jumped out at me, Mr. O'Brien, was the fact that there were acute or short-term exceedances that were tens and sometimes hundreds of fold higher than the MRL, and since I was asked to provide information about a hazard, that clearly met the threshold. I had no problem whatsoever saying that indeed there is a hazard here given the magnitude of these exceedances, and I put that in my report.

(Id. at 61).

This paragraph is a summary of the total substance of Dr. Weis' testimony about the toxic risk posed by hydrocarbons in indoor air in homes in Hartford. Neither his report, Ex. 165, nor his testimony reflect any further analysis. Dr. Weis provided no authority from the toxicology literature for a methodology that ignores usual principles of the careful assessment of risk, and instead permits a conclusion that there is an unacceptable risk based on the simple presence of some contaminants above a screening level, regardless of the extent, frequency or duration of any exposure. Even if he had established a basis for such a methodology, however, his testimony here would fail. At trial the factual predicate for his argument -- "that there were acute

or short-term exceedances that were tens and sometimes hundreds of fold higher than the MRL”
 -- was conclusively proven to be unfounded.

In preparing his report, Dr. Weis extracted from a much larger data set sample points where the acute MRL of 29 $\mu\text{g}/\text{m}^3$ for benzene was purportedly exceeded. (Weis Depo., p. 134). Out of more than 1,000 samples, he found 24 that he believed met his criteria. (*Id.*, pp. 143-144). Those purported exceedances, at the time of his report, were as follows. (Weis Report).

Location ID	Sample ID	Sample Date	Test Type	Dilution Factor	Test Type	Benzene
129 W Birch	129 W BIRCH-1	03/10/2004	Initial	131	TO15-ORIGINAL LIST	<210 U
129 W Birch	129 W BIRCH-1-2	03/10/2004	Initial	131	TO15-ORIGINAL LIST	<210 U
129 W Birch	129 W BIRCH-B	03/10/2004	Initial	322	TO15-ORIGINAL LIST	<520 U
129 W Birch	129 W BIRCH-B2	03/10/2004	Initial	328	TO15-ORIGINAL LIST	<530 U
129 W Birch	129 W BIRCH-B3	03/10/2004	Initial	168	TO15-ORIGINAL LIST	<270 U
707 N Delmar	707 N DELMAR	03/10/2004	Initial	40.2	TO15-ORIGINAL LIST	<65 U
310 N Delmar	060104-310-B East	06/01/2004	Initial	46	TO15-ORIGINAL LIST	<75 U
310 N Delmar	060104-310-B West	06/01/2004	Initial	73	TO15-ORIGINAL LIST	<120 U
130 E Watkins	130-B E. Watkins	06/08/2004	Initial	38.3	TO15-ORIGINAL LIST	<62 U
131 W Elm	071304-131 W ELM-1	07/13/2004	Initial	1.64	TO15-REDUCED ORIGIN	120 *
131 W Elm	071304-131 W ELM-B	07/13/2004	Initial	1.49	TO15-REDUCED ORIGIN	110 *
131 W Elm	071304-131 W ELM-BD	07/13/2004	Initial	1.49	TO15-REDUCED ORIGIN	110 *
131 W Elm	071404-131 W ELM-2	07/14/2004	Initial	1.58	TO15-REDUCED ORIGIN	52 *
131 W Elm	071404-131 W ELM-B	07/14/2004	Initial	1.52	TO15-REDUCED ORIGIN	52 *
131 W Elm	072904-131 W ELM-G	07/29/2004	Initial	3.28	TO15-REDUCED ORIGIN	420 *
111 E Forest	111204-111 E FOREST-E	11/12/2004	Initial	40.2	TO15-ORIGINAL LIST	3400 *
101 E Birch	120904101 E Birch S	12/09/2004	Initial	311	TO15-REDUCED ORIGIN	<500 U
101 E Birch	121004101 E Birch S	12/10/2004	Initial	5300	TO15-REDUCED ORIGIN	<8500 U
310 N Delmar	120104-310 N Delmar-S1	12/01/2004	Initial	19400	TO15-ORIGINAL LIST	<31000 U
119 W Date	011105-119 W DATE-E	01/11/2005	Initial	43.4	TO15-REDUCED ORIGIN	9700 *
134 E Watkins	011905-134 E WATKINS-B	01/19/2005	Initial	18.2	TO15-ORIGINAL LIST	<29 U
134 E Watkins	011905-134 E WATKINS-LR	01/19/2005			TO15-ORIGINAL LIST	<20 U
105 W Maple	092705 105 W Maple 1	09/27/2005	Initial	1.68	TO15-SUBSLAB	30 *
105 W Maple	092705 105 W Maple B	09/27/2005	Initial	1.55	TO15-SUBSLAB	31 *

U - compound analyzed for but not detected above the reporting limit.

* = Detected value is greater than comparison values for indoor air.

"<"=compound was analyzed for but not detected above the reporting limit (non-detected).

By the time of his direct examination, the number of exceedances had shrunk from twenty-four to twelve. Dr. Weis eliminated twelve of the above sample results on the grounds that he had made various errors in preparing his report. He attributed these errors to the

“complexity of the data-base, the size, etc.” (Trial Tr. Day 5, p. 12, ll. 3-5). Several of those “errors” were based upon exterior readings (the “E” designation), duplicates (the “DUP” designation) and the fact that two of the numbers did not exceed $29 \mu\text{g}/\text{m}^3$. Dr. Weis removed the six purported exceedances at 131 West Elm on the grounds that OSC Faryan had agreed that the benzene readings were attributable to indoor sources. (Trial Tr. Day 5, p. 15, ll. 17-25; p. 16, ll. 1-7).

Correcting the errors left these twelve exceedances remaining (Def. Ex. 1123):

Location ID	Sample ID	Sample Date	Test Type	Dilution Factor	Test Type	Benzene
129 W Birch	129 W BIRCH-1	03/10/2004	Initial	131	TO15-ORIGINAL LIST	<210 U
129 W Birch	129 W BIRCH-1-2	03/10/2004	Initial	131	TO15-ORIGINAL LIST	<210 U
129 W Birch	129 W BIRCH-B	03/10/2004	Initial	322	TO15-ORIGINAL LIST	<520 U
129 W Birch	129 W BIRCH-B2	03/10/2004	Initial	328	TO15-ORIGINAL LIST	<530 U
129 W Birch	129 W BIRCH-B3	03/10/2004	Initial	168	TO15-ORIGINAL LIST	<270 U
707 N Delmar	707 N DELMAR	03/10/2004	Initial	40.2	TO15-ORIGINAL LIST	<65 U
310 N Delmar	060104-310-B East	06/01/2004	Initial	46	TO15-ORIGINAL LIST	<75 U
310 N Delmar	060104-310-B West	06/01/2004	Initial	73	TO15-ORIGINAL LIST	<120 U
130 E Watkins	130-B E. Watkins	06/08/2004	Initial	38.3	TO15-ORIGINAL LIST	<62 U
101 E Birch	120904101 E Birch S	12/09/2004	Initial	311	TO15-REDUCED ORIGIN	<500 U
101 E Birch	121004101 E Birch S	12/10/2004	Initial	5300	TO15-REDUCED ORIGIN	<8500 U
310 N Delmar	120104-310 N Delmar-S1	12/01/2004	Initial	19400	TO15-ORIGINAL LIST	<31000 U

These twelve “exceedances” were at only five addresses. None was shown to exist longer than a single day. Many were not “tens and sometimes hundreds of fold higher than the MRL,” but only two to three ($65 \mu\text{g}/\text{m}^3$, $75 \mu\text{g}/\text{m}^3$) times higher, less than seven times higher, ($210 \mu\text{g}/\text{m}^3$), or less than twenty times as high ($500 \mu\text{g}/\text{m}^3$, $520 \mu\text{g}/\text{m}^3$ and $530 \mu\text{g}/\text{m}^3$) as the acute MRL. More importantly, every single one of the measurements relied on was not a sample where the laboratory had positively reported the presence of benzene, the contaminant that was being compared to the MRL’s. Rather, each of the “exceedances” was a “U” qualified value. As Dr. Weis testified, the “U” data qualifier is commonly understood to mean that “the compound was analyzed for but *not detected above the reporting limit.*” (Trial Tr. Day 5 am, pp. 69-70) (emphasis supplied). Thus, Dr. Weis’ testimony showed that he had chosen to forego the

ordinary methodology of risk assessment, not on the basis of “acute or short-term exceedances that were tens and sometimes hundreds of fold higher than the MRL,” as he testified, but on the basis of a handful of samples in which the laboratory was not able to detect the contaminant of concern at the reporting limit of the testing method used. That the laboratory detection limits for a handful of samples were higher than the MRLs does not mean that actual, measured exceedances--the exceedances that were the sole basis for Dr. Weis’ indoor air risk opinions--were present.

Dr. Weis’ reliance on this “U qualified” data without further analysis is directly contrary to USEPA requirements. If a “U” value exceeds the health-based reference concentration, USEPA guidance states that the sample should be reanalyzed or addressed qualitatively, as appropriate. (Def. Ex. 1051; Trial Tr. Day 5, p. 74, ll. 15-24). In this case, the USEPA, ATSDR and IDPH required re-sampling by the Hartford Working Group if the detection limit exceeded the comparison value. Dr. Weis, however, performed no further analysis. He accepted a handful of “U qualified” results as such overwhelming proof of unacceptable risk that no further thought was necessary.

If the demonstrated flaws in Dr. Weis’ analysis went no further, they would warrant excluding his testimony. But there is more. As indicated, ENSR did study the circumstances behind the “U qualified” results. Its resulting analysis yielded other, better data for measurement of the benzene risks in the homes at issue. That data shows conclusively that the feared levels of benzene -- at tens and hundreds of times the acute benzene MRL -- were simply not present.

On March 10, 2004, ENSR took five indoor air samples at 129 West Birch. (Def. Ex. 1115). Analyses of these samples were the source of the first five of the twelve benzene exceedances that Dr. Weis relied on at trial, as reflected in the above table. In one analysis, as a

result of the dilution factor selected by the lab, while benzene was not-detected the reporting limits were well above the acute MRL's as set forth in the schedule above. Id. To remedy the dilution factor problem, the five samples were rerun (i.e., reanalyzed) at a higher concentration (i.e., a lower dilution amount) to determine the actual concentrations of benzene. Id. On each retest, benzene again was not detected above reporting limits. This time, however the reporting limits were less than the acute MRL. Id. The retest values are the valid results and the higher non-detects are artifacts of dilution. (Trial Tr. Day 16, p. 136, ll. 24-25; p. 137, ll. 1-4). ENSR reported to the homeowner the rerun values. (Def. Ex. 1030). This issue was not discovered by Defendant until it received an electronic version of the tables from which these data were extracted, which contained a hidden column containing the dilution factors.

There were thus no exceedances of the benzene acute MRL at 129 West Birch on March 10, 2004; Dr. Weis' purported exceedances were all an artifact of the dilution factor in the sampling procedure. (Trial Tr. Day 16, p. 140, ll. 23-25; p. 141, ll. 1-5). The same proved to be true of the claimed "exceedances" at the other four addresses identified in the table:

(a) At 707 North Delmar (Def. Ex. 1115) the original test for benzene was $65 \mu\text{g}/\text{m}^3$ U at a dilution factor of 40.2. Id. Since this amount potentially exceeded the acute MRL, benzene was retested at a higher concentration (using a dilution factor of 1.61), with the result being $26 \mu\text{g}/\text{m}^3$ U, which was less than the acute MRL. Id. The $26 \mu\text{g}/\text{m}^3$ U is the valid reportable value. (Trial Tr. Day 16, p. 141, l. 25; p. 142, ll. 1-2).

(b) At 310 N. Delmar, where two of Dr. Weis' "exceedances" occurred, samples taken the same day were rerun with different dilution factors; the values reported to the homeowner were the rerun values, which showed no exceedances. (Def. Ex. 1033). There were no exceedances of the benzene acute MRL at 310 North Delmar on June 1, 2004. The same

address was the source of by far the highest “exceedance” relied on by Dr. Weis, a “31,000 U” for benzene measured in a sump at that address on December 1, 2004. Dr. Weis ignored the fact that there were two sump pit readings at that address that day. Id. This house does not contain two sumps. (Def. Ex. 1032). One reading was 31,000 $\mu\text{g}/\text{m}^3$ U (at a dilution factor of 19,400) and the other was 3.7 $\mu\text{g}/\text{m}^3$ U (at a dilution factor of 2.33). As the trial evidence shows, the 31,000 $\mu\text{g}/\text{m}^3$ detection limit was so high, not because benzene was present in the sample, but because the sample had been diluted 19,400 times before being run through the detection instrument, with a resulting loss in the instrument’s ability to measure the contaminant.. The lower value, as Defendant’s experts testified, was the one to be used. Dr. Weis, single-mindedly focused on his handful of “exceedances,” simply chose to ignore the lower result.

(c) At 130 E. Watkins, one set of tests showed benzene at 62 $\mu\text{g}/\text{m}^3$ U (38.3 dilution factor), another set of tests showed benzene at 11 $\mu\text{g}/\text{m}^3$ (1.34 dilution factor) and another showed benzene was retested with the result being 9.8 $\mu\text{g}/\text{m}^3$ (1.34 dilution factor). ENSR reported the 9.8 $\mu\text{g}/\text{m}^3$ to the homeowner, (Def. Ex. 1035). There was no exceedance.

(d) At 101 E. Birch, the sump pit benzene concentration (taken at a 5,300 dilution factor) was 8,500 $\mu\text{g}/\text{m}^3$ U. Id. The sump pit reading was rerun at a higher concentration (52.8 dilution factor) and the benzene concentration was 84 $\mu\text{g}/\text{m}^3$ U. Id. This meant that the benzene concentration in the sump pit was less than 84 $\mu\text{g}/\text{m}^3$ which could mean that benzene in the basement potentially exceeded the acute MRL. The 84 $\mu\text{g}/\text{m}^3$ is the valid reportable value. (Trial Tr. Day 116, p. 146, ll. 22-25). In any case, the sump pit was not “indoor air.” (Mr.

Faryan testified that sump pit¹ readings were not readings from indoor air. (Trial Tr. Day 2 at 112)).

At trial, Dr. Weis advanced a number of additional arguments intended to save his opinions about the hazard from indoor air toxicity, but those arguments were shown to be baseless. Without any factual support, he hypothesized that the analysts must have been filtering the samples and losing contaminants as a result. This is belied by the order in which the samples were run, as Defendant's experts testified. He relied on findings of hexane and isopentane, rather than benzene "exceedances" described in his report. Defendant's experts carefully refuted these contentions, as reflected in Defendant's Proposed Findings of Fact and Conclusions of Law pp. 237-244.

The flaws in Dr. Weis' air opinions about toxicity hazards in the indoor air in homes were matched by flaws in his analysis of other toxicity risks: in sub-slab vapors and in the Hartford Community Center. He did not testify to any direct exposure to the sub-slab vapors. He did not demonstrate actual elevated levels of benzene and other hydrocarbons inside the homes, and so did not establish that intrusion of vapors through the sub-slabs has presented any real risk to anyone.

When the "dilution factor" problem in Dr. Weis' testimony became apparent at trial, Apex moved to exclude the testimony. The Court reserved ruling on the motion and allowed Apex to offer its own evidence on the subject. (Trial Tr. Day 12 am, p. 47). At the close of all the evidence, the Court denied the motion to strike. (Trial Tr. Day 17, p. 113). It is evident that Dr. Weis' testimony is utterly without scientific or technical basis, and should not be part of this

¹ The reference in the unofficial transcript uses the term "sub-pit," but this appears to be a transcription error.

record. Defendant, thus, now renews its motion to strike. Dr. Weis' testimony should be excluded.

III. DR. WEIS IS NOT QUALIFIED TO TESTIFY ABOUT FIRE AND EXPLOSION RISKS; HIS TESTIMONY ON THOSE SUBJECTS IS DEVOID OF SCIENTIFIC REASONING OR SUPPORT.

Dr. Weis is a toxicologist. His expertise is in poisons, not explosions or fires. Whatever expertise Dr. Weis might have in analyzing the toxicity risks of chemicals does not qualify him to testify about fire and explosion risks. Dr. Weis in fact testified that he reached his conclusions about the fire risks even though he was not a forensic expert when it came to fire causes. (Trial Tr. Day 5, p. 143, ll. 10-16).

The government attempted to establish Dr. Weis' qualifications as a fire and explosion expert in this exchange:

Q. Through your training and experience, have you become familiar with the methods that are used to assess the risk of explosion caused by flammable gases or other chemical substances?

A. Yes, I have. All EPA employees that are involved with emergency response, as well as all firefighters in the country. Police officers that are involved with hazardous materials are required to take specific training in explosion hazards, how to measure them, how to address them, safety protocols that are used generally and consistently throughout various emergency response groups that do this type of work so that they all have the same approach to explosion hazards, trained in the field equipment that's used to monitor for explosive hazards, PID/FID. I've used those in the past, and certainly teams that I've directed have used those regularly.

(Tr. Day 4 pm, pp. 57-58).

Plaintiff could hardly have meant to suggest that "all EPA employees" are sufficiently qualified in the risks of fire and explosion so that they have "scientific, technical or other specialized knowledge" so as to assist the Court as finder of fact, as Rule 702 requires for admissibility. Past use of PID/FID equipment does not equate to the "knowledge, skill,

experience, training or education” necessary to evaluate PID/FID data and determine whether that data demonstrate an unacceptable fire or explosion hazard of hydrocarbons in a particular setting.

Dr. Weis’ lack of qualification in the area of fire and explosion hazard is matched by the lack of substance in his opinions themselves. As he testified, he did no analysis of the source or causes of the historic fires (the most recent of which had occurred eighteen years before trial) that were the centerpiece of Plaintiff’s case about fire risk. (Trial Tr. Day 4 pm, p. 28). He based his opinions as to fire and explosive hazards on his findings that concentrations of hydrocarbons in soil gas randomly and unpredictably exceed 10% of the LEL. In the sub-slab data, there were approximately six samples with that exceedance. (Trial Tr. Day 5, pp. 139-140). There were no such exceedances indoors. (Id. at pp. 140-141). These were out of thousands of samples reviewed by Dr. Weis. (Id. at p. 140). Since the date of the Weis Report, additional LEL testing has been conducted in Hartford by ENSR. (Def. Ex. 1115). Out of 3,852 LEL tests, only three greater than zero have purportedly been detected in Hartford homes. Id. There was a 12% at 310 North Delmar on December 1, 2004, and two 4% at 101 East Birch on December 9, 2004. Id. Upon further review, these three tests were from the sump pit and not indoors. Id. As such, they should not be considered indoor LEL readings, and apparently Dr. Weis is in agreement because he did not include them in the Weis Report as exceedances, even though they had occurred prior to the date of his report. Dr. Weis is relying solely upon sub-slab data to support his opinion. However, the fact that there are no indoor LEL readings in excess of 0% refutes Dr. Weis’ assertions that the sub-slab concentrations may infiltrate homes.

As additional justification about his conclusions regarding fire and explosivity hazards, Dr. Weis cited an example of a leaking pipeline of which he was familiar that caused an

explosion in a nearby bank. (Trial Tr. Day 5, p. 151, l. 19 to p. 152, l. 15). However, Dr. Weis testified that the fuel seeped into and vaporized within the bank. Id. Dr. Weis' opinion as set forth in the Weis Report is that the vapors from the LNAPL may cause the explosion. However, in the example he cites, the fresh released product on the surface caused the explosion. His example does not support his opinion. Dr. Weis' opinions as to fire and explosivity should be stricken; they are the unfounded speculations of one who is a layman on areas of fire and explosion risks.

Conclusion

For the reasons stated, the Motion to Strike the Testimony and Report of Dr. Christopher Weis should be stricken.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that on the 11th day of April, 2008, I electronically transmitted the foregoing document to the Clerk of Court using the ECF System for filing and transmittal of a Notice of Electronic Filing to the following ECF registrants:

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